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Health

A Journal Devoted to Healthful Living

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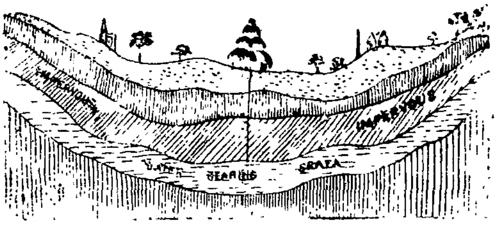
EDITORIAL

THE CINEMA AND HEALTH EDUCATION OF THE MASSES.

It is an undeniable fact that at the present day the cinema exerts a profound influence over the people throughout the world, for good or for evil. There are in the world to-day 61,994 public halls for Cinematographic performances of which 36,955 are wired for sound. We have in India itself 685 installations of which 220 relate to sound films. The largest number of installations is to be found in the United States, 19,042, of which 14,000 are sound films. The next in rank comes Germany with 5071 installations, of which 3,700 are sound films. England comes only third in the list, with 4950 of which, 4228 are sound films and France takes the fourth place with 3950 cinemas of which 2500 are wired for sound. For a decade and more this magnificent mechanical instrument meant nothing more than a mere distraction, excitement or even the demoralization of the spectator. The city dwellers had already absorbed these evils to an intolerable extent, while the poor peasant in the rural parts is just beginning to come in contact, through the screen, with 'women of a beauty never dreamed of, with love scenes which provided an erotic excitement through their details of a sentimental existence hitherto unsuspected. The bad moral influences resulting from films of a particular kind such as detective tales, criminal trials or scenes, more or less depraved love scenes and corrupt surroundings have been universally recognized and to fight out this evil influence, attempts have been made from time to time to produce films to interest the countryman without disturbing his peace of mind'. In France a novel experiment

is now being tried to give instruction to the masses in rural parts in hygiene and sanitation, social hygiene, in th

Artesian well



Artesian well. Contains pure water.

scientific methods of agriculture and so on. Touring groups organized by the General Propaganda Commission of the National Bureau of Social Hygiene, set out in automobiles to various provinces in France with necessary apparatus for a talkie and lecture to the inhabitants of the rural parts on health and social hygiene topics. For instance, last year, 'good drinking weeks' were organised and the lecturer's aim, especially in those communes badly supplied with drinking water was to insist on the hygienic necessity of using pure water. Another film, 'the spring and water and health' was shown to crowded audiences. Agricultural and industrial films were also shown and the people very much appreciated those films. "Farmers and countryfolk who would not have troubled to come to listen to a lecture willingly took the trouble to attend lectures which were supplemented by sound and talking pictures and music".

Propaganda of this kind is badly needed in India. We have had enough of demoralising scenes exhibited in this country, the films having been mostly imported from foreign countries and in spite of strict censorship, put on the screen. We are glad to find however that four district boards in our own Presidency, viz, Vizagapatam, Krishna, Chingleput, and Bellary maintain por-

Tank water for drinking purposes.—Insanitary.

table cinema outfits for health propaganda. The latest innovation is the auto-cum-talkie.

As observed by a writer in the International Review of Educational Cinematography, " If to-day our country-folk know something about hygiene and how to defend themselves against social diseases, if they insist on pure water brought to their villages and know how to prevent their cows from contracting tuberculosis, our lecturers are to be congratulated thereon. The peasant ought to realize that a part of his success is due to the use of the cinema. and especially the sound and talking cinema."

We hope the Goverment and Local Bodies, will take necessary steps to ban all bad films and see that the cinema is turned to good purpose for the regeneration of the already emaciated, impoverished, and demoralised Indian nation.

THE HEALTHY DIET

BY

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Introduction.—The human body is a living organism and it is composed of numerous living cells. Each group of cells has got to serve different functions. Disintegration of tissues is taking place during every moment of existence. For the proper maintenance of health, the waste material must be removed, also the replacement of tissues should be brought about by the food we eat.

Let it not be for a moment thought that a lage amount of food should be taken in to maintain health. Some people no doubt think so, and even adopt it but it is a grave mistake. Why? After all, a certain amount of disintegration only takes place and it is only that, that has got to be replaced. Further, the digestive juices are secreted only in limited quantities and depending upon the needs of the body. As such, only when the proper quantity of food in the required proportions, is taken in by the individual, health can be maintained. What will happen if excess is consumed? Digestion is impaired. Stagnation of the partially digested food takes place and this in turn acting as a poison sets up irritation in the alimentary tract.

The choice of food.—I am not concerned here as to whether it is preferable to have vegetable or meat diet. Each side can advance its own sound arguments. Diets, I personally think will have to vary according to climatic conditions and according to the environment of the individual. Briefly, the body is composed of several kinds of tissues, as, Proteids, carbohydrates, fats, salts and water. It will be too technical to discuss the the exact proportion of each and how there are disintegrated, but it will naturally follow that when we speak of replacing the body tissues by ingesting food, we mean that the food should

also contain in happy combination all these kinds of food stuffs (viz.) proteids, carbohydrates, fats, salt and water.

Protein is found in white of egg, casein of milk, all meat foods, gluten of wheat etc.

Fat is found in fat of meat, fat of milk, olive oil, oil of corn, wheat etc.

Carbohydrate is found in sugar, starch, rice and wheat etc.

Salts—phosphates, carbonates, chlorides and sulphates of lime, sodium etc.,

Water is found in abundance everywhere.

How are these utilised in the body? Protein is used to build up the solid tissues of the body, the muscle and tendons. It is also a source of nourishment for the brain and nerve substance and partially serves as fuel.

Fats simply form fatty tissue and serve as fuel to maintain the heat of the body by combustion or oxidation.

Carbohydrates serve as fuel owing to the large percentage of carbon they contain which readily unite with the oxygen.

The salts are employed in hardening the bone and also utilized in blood and other tissues. Below is a list of the important food stuffs showing their composition.

IN 100 PARTS

	Protein	Starch	Fat	Salt
Lean Beef	20·2	0·0	3·6	2·0
Fat	16·9	0·0	20·0	3·1
Mutton	17·1	0·0	5·7	1·2
Veal	18·8	0·0	4·4	0·5
Egg white	20·4	0·0	0·0	1·6
,, yolk	16·0	0·0	30·7	1·3
Cow's milk	4·2	4·5	3·7	0·7
Cheese	28·0	1·0	23·0	7·0
Butter	2·0	1·0	85·0	1·0

IN 100 PARTS

	Protein	Starch	Fat	Salt
Cabbage	5·0	7·8	0·5	1·2
Potato	2·2	21·8	0·2	1·0
Sweet potato	1·0	25·2	0·2	2·7
Beans	23·7	55·6	2·2	3.7
Green peas	6·3	12·0	0·5	0·8
Lentils	24·8	54·7	1·8	2·4
Wheat flour	11·6	71·0	1·3	1·6
Arrowroot	0·8	83·5	0·0	0·3
Rice flour	7·0	78·5	1·0	2·4
Banana	4·9	19·2	0.6	1·1
Apple	0·4	7·2	0·0	0·5

In the accompanying table is given the length of time required ordinarily to digest the food.

	Hours.
Apples raw ...	2·0
Beef boiled ...	4·0
Beets boiled ...	3·45
Brain animal boiled ...	1·45
Bread ...	3·15
Butter melted ...	3·30
Cabbage boiled ...	4·30
,, raw ...	2·30
Cake sponge ...	2·30
Cheese ...	3·30
Beans boiled ...	3·45
Eggs hard boiled ...	3·30
,, soft boiled ...	3·00
Fowls boiled ...	4·10
Lamb boiled ...	2·30
Milk boiled ...	2·0
,, raw ...	2·15
Mutton roasted ...	3·15
,, boiled ...	3·0
Potatoes boiled ...	3·30
Rice boiled ...	1·0
Soup barley ...	1·30
,, bean ...	3·30
,, chicken ...	3·0
,, mutton ...	3·30
Tapioca boiled ...	2·0
Vegetables (average) ...	2·30
Venison steak ...	1·35

It is therefore obvious that all the elements necessary in one food must be combined in proper proportions so that no one part of the body shall be over nourished at the expense of others—no organ overtaxed but that all may be harmoniously developed.

How to eat.—This may look quite simple but it is here the greatest indiscretion is committed in our every day life. We have heard quite commonly "Oh just five minutes, I will finish my meal and join you." After all for the most vital thing *i.e.*, replenishing our wasted tissues by taking in food, we spend just five minutes by gulping down our food and rushing out. Such practices besides being unwholesome cause considerable harm to the individual in the long run. It must be distinctly understood that from the time food is put in the mouth, digestion proceeds at every stage. The act of mastication besides breaking down the various food masses into fragments also serves to mix the salivary juice freely with the food particles which again in its own turn partially digests the food and partially helps to lubricate the food in its passage down the gullet. Now what happens if proper mastication is not taking place. Besides the deficiency of salivary digestion, hard food such as meat which requires breaking up is shoved down into the stomach and the stomach has to do extra work. Thus extra strain is thrown on the stomach giving rise to early decay. Drinking at meals should be avoided as much as possible. The philosophy of this is apparent when we reflect that most digestive disturbances are accompanied by imperfect secretion of the gastric juices and to dilute them with an excess of fluid is to weaken its power of action on the food. Particularly the most pernicious habit is drinking iced water during meals. The cold iced water, in addition, drives the blood away from the stomach when it is most needed there. To bring about proper digestion, the stomach has to get warm, involving expenditure of nervous energy again. Last of all, it must be also borne in mind that there must be a healthy contented and pleasing attitude

Eat at regular intervals.

when we eat our dinner. The secretion of the digestive juices among other things is also controlled by emotion. Anger and melancholy temperament inhibit the secretion of the digestive juices, while mirth and laughter promote digestion. It is a common saying among all nations "Eat in company."

When to eat.—There must be regular hours. Whatever is eaten and whenever it is eaten, food should be mode-

rate in quantity and there must always be sufficient interval in between 2 meals to empty the contents of the stomach into the small intestines and also to give sufficient rest for the various secreting glands in the stomach. The practice of 'having a bit' in between meals should be strictly deprecated. Resting before and after meals is a very good habit and as far as possible, resting flat in bed instead of lounging in the chair is very wholesome. Do not eat immediately after a strenuous exercise or do not follow the meal with work. Particularly brain workers like students will do well to refrain from hard mental work for at least half an hour after food. The time spent in resting at that time, will save many sick days in bed later on.

If you do not feel hungry or if you are disinclined to take food, never force yourself to eat. It is always better to miss one meal and get better, than to eat one extra meal and seek the doctor.

Some time later, I will discuss the question of vitamines in our every day food.

A few dont's for the healthy living.

Don't eat when you are not hungry.
Don't get angry when you eat.
Don't gulp down your food.
Don't eat what you don't fancy.
Don't drink during meals.
Don't rush to work immediately after food.
Don't eat between meals.
Don't load your stomach.
Don't drink stimulants.
Don't fail to drink plenty of water.
Don't ignore your bowel habit.

GERMS IN THE HOUSE-HOLD OF NATURE.

BY

S. SITARAM

NATURE has blessed this planet of ours with the creation of many forms of life. Scientists remained for a long time in a sort of illusory self-complacence, when they had finished the study and classification of all creatures visible to their naked eyes. But, the invention of powerful optical instruments ushered in a new era of discovery. Many small bodies, once invisible, now became visible to their aided eyes. Some were found floating in air, some swimming in water and some living in the soil. Repeated observation and experiment enabled the students of science to acquire more and more knowledge about them. Now, one of the triumphs of modern science is the discovery of the relation between these microscopic organisms and the numerous diseases that prevail among men and other animals. It is, therefore, worthwhile to make a rapid survey of the life, growth, death and work of these bodies.

Natural Science mentions these tiny bodies as the most primitive form of life that came into existence. They are called by different names. Germs, microbes, bacteria and bacilli are some of the terms by which they

are described. Medical science generally uses the names 'bacteria' and 'bacilli' when it speaks of these organisms. Literally the terms are derived from the Latin words 'bacterium' and 'baculum', both of which meaning 'a rod'. So they are rod-like bodies in shape and unicellular in structure. Many of them are actively motile, though some are not. They feed on dead and live tissues of animals and plants. Those that live on the dead animals and plants are called saprophytic, and those that are formed on the living parts, are known as parasitic microbes. Their chief work consists in decomposing and disintegrating higher complex organisms in the world. They multiply with great rapidity either by transverse division of cells, or by formation of spores. Like every other creature, these also have their affinities and aversions. In a favourable climate and suitable medium they thrive in millons in a wonderfully short time and find no great difficulty in decimating the inhabitants of a locality.

In order to understand the magnitude of the havoc done by these invisible organisms, *sans* organs and limbs, we shall imagine a beautiful and prosperous region, preferably a valley, where gigantic trees, thick and luxuriant grass, various forms of moving life and other features abound. If we but place a few of these dangerous organisms there, and allow them to multiply unchecked, it shall not indeed be very long before that lovely spot is reduced to a dreary, desolate desert, devoid of even a single blade of grass.

Having said so much about their destructive capacity it is now necessary to see how they become the cause of diseases and death of other creatures. It is found that in a congenial atmosphere they grow and spread rapidly. During their period of activity they secrete certain products called the *toxins* and the *ptomains*. They are no doubt poisons but in large quantities they cause the death of animals and men. Nature in her infinite wisdom, has so adjusted that a small drop of these poisons kills millions of the tiny creatures from whose bodies they are secreted. This fact, science has exploited, and inoculation has become one of the methods by which a successful protection against and a powerful check upon these pathogenic organisms are secured. That is why we find inoculation going on in full swing when diseases like cholera, plague and small-pox take the form of an epidemic in a locality.

Benefits of inoculation are receiving increasing attention at the hands of the professionals and lay men. When the virus is injected into the blood stream of a healthy man in a moderate dose, a mild attack of the disease he gets as a result of the poison. But so long as this virus remains in the system the particular disease-producing germ cannot enter the body, and the man is said to have attained immunity from the disease. Hence we find several kinds of vaccines for several diseases.

Besides their own secretory products proving deadly to these microbes, there are several natural agents always at work to bring about their destruction. They are sunlight, heat and certain chemical agents such as salt,

iodine, hydro-chloric acid and others. We can now understand why we dry some of our food stuffs in the sun, heat others over an oven, and treat others with certain preservatives such as common salt. When heat was discovered to be a destructive agent, the method of sterilisation came into vogue.

Medical science brings to light from day to day several kinds of diseases, some peculiar to lower animals, and some to humanity at large. It is also making earnest endeavours to fight out these diseases by finding out their origin which is always traced to one kind of bacteria or bacilli.

We have been all the while looking at one side of the picture only. We should not fail to recognise the fact that everything in this universe has been created with a purpose. Apparently insignificant as these microbes are, they are created to render a great service. Try to visualise a condition of this world where no kind of microscopic bodies are allowed to exist. What shall we see then? Malaria, Small-pox, cholera and other diseases will be unknown. Very good. Wounds inflicted with weapons will very soon heal. Mutton bought from the butcher's shop will keep good for any length of time. Butter several months old, will be as fresh as when churned out of milk. Eggs will never rot. Fruits plucked from trees will continue to be good and fresh for a long time; and then there will be no need for ice-chambers for preserving meat and fruits. Mangoes freshly taken from a tree in a South Indian village will find their places in the fruit stalls in England, and meat newly chopped in Chicago will be available in China or India without undergoing any change. Truly this is a consummation to be devoutly wished for.

But this is not all. There is the other extreme. This golden-age, if it can be so-called, will be ephemeral. When plants and animals die, their dead bodies will not rot and decay. In course of time soil will become poor in plant food, because nitrification will not take place without bacteria. So plants will die. When plants die, animals that live on plants will also die one by one. This may go on for some time and man, the last of the survivors will gorge himself with the flesh of dead animals that never putrefy. But in the end he will also share the fate of others, and a time will come when he will lie dead out of starvation. What will then be the state of the world? Supposing a man from the Mars or some other planet dropped down upon this earth of ours, what would he then see? A vast stretch of dreary desert, destitute of any kind of life. We ourselves shudder when we imagine a spectacle of that description.

In conclusion let us join in the chorus of voices of the mightly thinkers of the past and the present and say that in the great household of Nature all things, both great and small, have a place, and man's boast of having conquered Nature is nothing short of a myth. He has but touched the fringe of a vast fabric and much remains to be discovered and solved.

SOME PUBLIC HEALTH DON'TS

BY

R. NARAYANASWAMI, M.A.,

Triplicane, Madras.

(1) Don't spit out indiscriminately on public roads, streets, lanes etc.

(2) Don't blow nose and don't cough while passing along public streets and roads without any regard for the feelings of those walking beside you.

(3) Don't consider street ends, narrow lanes, ridge-ways, canal banks and similar places partially hid from view as public urinals.

(4) Don't follow the insanitary practice of allowing children to commit nuisance in the streets alongside the houses.

(5) Don't allow the ladies or servants of the house to throw rubbish haphazardly all about the street instead of into the rubbish cans provided by the corporation.

(6) Don't allow the sweepers, either your own or the municipality's to sweep the streets in such a manner as to raise clouds of dust that literally choke the passers by.

(7) Don't allow road side Appamwallahs to conduct their trade in front of or near your house.

(8) Don't allow children to play on dust ridden roads and streets.

(9) Don't be eating anything while you are passing thro' the dust-ridden roads and streets.

(10) Don't fail while on public roads to close your mouth and nose until the clouds of dust raised by a passing motor car pass you.

(11) Don't eat from road side *Appamwallahs* or from other vendors and hawkers selling exposed things.

(12) Don't sip at hotels.

(13) Don't prefer plates to leaves for taking your lunch at hotels.

(14) Don't drink any water that comes to hand to quench your thirst-especially during big fairs and festivals which attract huge concourse of people.

(15) Don't give rotten food etc. to beggars coming to you for alms.

(16) Don't hide cases of infectious diseases.

(17) Don't consider the Public Health Officials as a great nuisance and don't fail to observe scrupulously departmental regulations which are for your and others' benefit.

(18) Don't fail to be a real citizen and don't fail to complain to the authorities whenever necessary.

PERSONAL HYGIENE

BY

N. RAMAKRISHNAN, (*Vellore*).

(Continued from page 99 of the April, 1933 issue).

Rest:—The body requires complete relaxation from all physical and mental activities for a few hours in a day. This is what we call rest, which is quite essential if the system should function as it should. Without rest the body becomes subject to disease. During sleep the body has complete rest and thus repairs its waste and prepares itself for the next day's work.

Everyone must therefore have a sound and unbroken sleep. This can be best secured by observing the following simple rules:—

(1) Avoid heavy meals before going to bed as it disturbs the healthy sleep and take your last meal at least two hours before retiring.

(2) Avoid all worries and anxieties when taking bed.

(3) Have sufficient ventilation of in the bed room and keep your bed room as clean as possible.

(4) Take some sort of physical exercise, say brisk walks, in the evenings as it will promote good sleep.

(5) Avoid excessive use of coffee, tea, tobacco and other stimulants and have a free and daily movement of the bowels.

It has been intended by Nature that a man should have sleep for eight out of every twenty four hours, that is to say, one-third of our life is devoted to sleep. But the duration of sleep varies according to the health and age of the individual. Generally the duration of sleep is as follows:—

Age	*Hours of Sleep.*
During the first year.	20
Second to fifth year.	15
Fifth to tenth year.	12
Tenth to eighteenth year.	9
Adults.	8

Those who are not in good health require more amount of sleep because complete rest forms an important factor in the treatment of diseases.

You must make it a habit to go to bed early and rise early for "Early to bed and early to rise, makes a man healthy, wealthy and wise." One hour of sleep before midnight is equal to two hours after it.

GENERAL.

The following general rules of health and happiness will add to the usefulness of the subject in question:—

(1) 'Moderation' in eating, drinking, exercise, sleep, business or pleasure, in fact moderation in each and every thing that concerns you, must be your golden rule throughout your life, and a famous writer once said that "moderation" must be the motto of a perfect and ideal man.

(2) Observe complete fast once a month or a partial fast once a fortnight as this gives a chance to the internal organs to take rest and to work again with renewed activity.

(3) Keep sound, strong and clean teeth by brushing them thoroughly

every morning with suitable tooth powder or paste and giving them proper exercise.

(4) Expose your body now and then to sun-light as it is the Nature's health-giver and germ-destroyer.

(5) Have some form of recreation for a small portion of the day as it is necessary to give you a change from the routine, worry and monotony of your work.

(6) Avoid all intoxicating drinks as well as tobacco and smoking as they have a very harmful effect upon the nervous and respiratory systems.

(7) Cultivate happy and cheerful mind. Love others, and avoid anger, hatred, anxiety, fear and worry as they are the enemies of health.

(8) Indulgence in excessive and unnatural sexual intercourse undermines your health. Therefore avoid it.

(9) Never bite the nails of your fingers nor the hair as they inject poison into the body.

(10) Never sit or sleep with wet feet as they will affect the kidneys and the lungs.

(11) Take great care of your hair and skin if you want to preserve your beauty.

(12) Do not forget to eat more green vegetables, fresh ripe fruits, nuts in the place of condiments and sweets.

(13) Never mingle with persons who are suffering from infectious diseases like consumption, leprosy, small-pox, poisonous fevers, etc.,

(14) If you want to preserve your eye-sight up to a pretty old age, read in sufficient and proper light, do not look directly at the sun nor read in bright lights, never strain your eyes by reading small prints, never read in the sun-light, avoid reading when lying down and when in motion, do not expose your eyes to constant dust ; and massage the scalp and the feet once a day with a natural cooling oil.

(15) Never think of your past follies and set yourself right by directing your attention and energies towards a bright future.

(16) Pray to God daily to sail you in the voyage of life and to make every affair of yours a success.

LAUGH AND GROW FIT

BY

CLEMENT JEFFERY, M.A.

Is it not a curious fact that man is the only creature who laughs? A dog's face may be wreathed in smiles ; a hyena's cry is known popularly as his laugh ; but only man can give vent to true laughter, induced by a situation which appeals to the sense of humour.

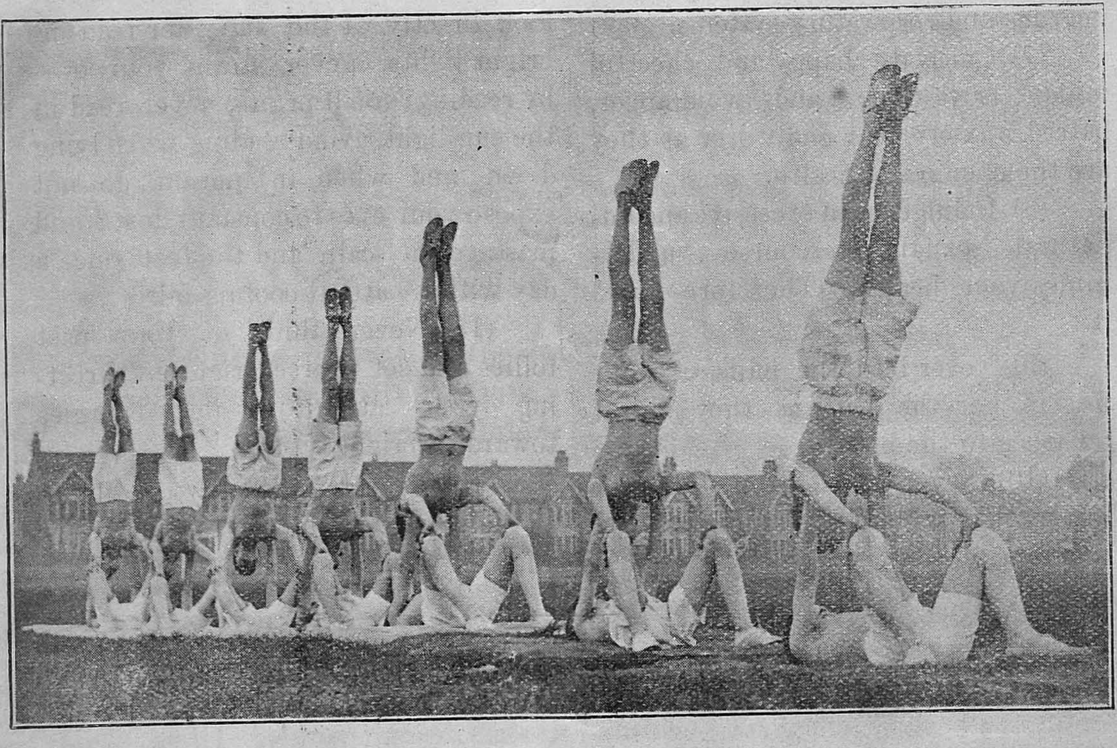
Laughter has been condemned as a sign of vulgarity. Did not Lord Chesterfield in his famous Letters to his Son warn him against the unseemly act of laughing? But his lordship neglected one vital fact—and that is that everyone feels so much better after a good laugh.

For laughter is health promoting. It shakes up vital organs and effects an internal massage of the heart, the pan-

creas, and the glands of internal secretion, especially those situated in the neck. If we place our hands on this very constricted part of the body during laughter, we can feel how powerful are the vibrations set up. Here are situated the thyroid gland, the thymus, and the carotid glands. These respond to the vibrations set up by laughter. Their effect on the body as a whole is profound.

Exercising the Diaphragm.—During the laughter, the diaphragm is thrown most vigorously into action; this is the muscle which separates the abdominal region from the chest. While we are laughing, this large muscle may be jerked up and down to the extent of six inches; and so the heart and lungs which lie immediately above the diaphragm, and the kidneys, intestines, and other organs lying below, are all shaken into a healthy activity.

That the movement set up by laughter is most desirable is clear if we consider the habitual posture of man. Most of us occupy the sitting position for too long a time. Sitting at desks and machines tends to compress the vital organs besides rendering them sluggish. Exercise, of course, is highly beneficial. Walking, running, swimming, and riding are all excellent forms of stimulation. Yet exercise cannot do quite the same work on the vital organs as the internal movement set up by the diaphragm during laughter.



Boys of the Dayton County High School, London practising shoulder stands:—a wholesome exercise.

The effect on the lungs.—Take, for example, the effect of laughter on the lungs. Ordinarily, these are not used as fully as they should be; they are not extended to their fullest capacity.

One of the weak spots in the lung is the apex. This part is rarely adequately ventilated. It is little wonder that this part of the lung is most usually the seat of disease.

Germs find in the apex a suitable soil, and so they multiply, to the harm of the host. But when we laugh, the diaphragm moves violently up and down; large draughts of air rush into the lungs; the vitiated air is powerfully ejected, producing in the larynx the sounds of laughter.

It is no argument against laughter to say that the noise emitted is objectionable. While it is true that some people do laugh in a manner that can make sensitive people shudder, it is also true that there are no sounds so delightful as those of musical laughter. It all depends on who is laughing. But in every case the body and mind—even if the cause of the laughter may not be of the drawing-room variety—derive benefit: the body, from the vibration and movements of the diaphragm; and the mind, from the relief from the nervous tension of daily life.

Laughter and the Liver.—Many people are liverish because they do not get enough laughter; for this is a form of "exercise" which has a direct effect on this large organ belonging to the digestive system. The liver contains the gall-bladder, which secretes an important digestive fluid and lubricant known as bile; and this secretion helps in the digestion of the fatty elements of our food.

Besides secreting this digestive juice, the liver manufactures from starchy foods an organic sugar. This influences in a remarkable way the staying power of the body; therefore the more efficiently the liver is working, and the more adequately the circulation flows through it, the better will be our health, physically and mentally.

To appreciate what laughter does for the liver, we should bear in mind that this organ is not a fixture. It hangs down in the abdomen and is supported by ligaments. Some of these are enclosed in the abdominal wall, while others are attached to the diaphragm. During laughter, the movements of this broad muscle cause the liver to be shaken vigorously up and down.

The effect of the movement is that of a self-massage. The circulation in the organ is powerfully stimulated, while its functional activity is increased. In this way the digestion can be vastly improved. The old phrase, "Laugh and grow fat," has its significance. It implies an improved assimilative power of the digestive system.

Good for the Heart, too.—Another organ benefiting from laughter is the heart. Its lower part, protected by its sac, rests on the diaphragm. When this muscle is jerked up and down during laughter it rubs against the right portion of the heart and moves the organ at the same time. Laughter is therefore good for the heart, and since the action of this organ is largely under the influence of the emotions, it is clear that periods of gaiety and indulgence in laughter—within moderate limits—constitute an excellent stimulant for this engine, which is responsible for pumping the vital fluid throughout the body.

Reference has already been made to the glands of internal secretion. Although they are so small and their

secretion is so infinitesimal, they profoundly influence the growth and development of the body. For example, the adrenal glands, which are situated over each kidney, have a powerful influence on the nervous system, as well as on the sexual development of the individual. They also directly influence the tone of the muscles and prevent fatigue. Their position in the body is such that during laughter they are gently massaged. This action has a beneficial influence on the quality of the secretions.

The thyroid gland is responsible for a secretion containing iodine, and an absence of this means almost certain death. The normal quantity needed in the human economy is infinitesimal—four-hundred thousandths of a grain per day. If this amount is not forthcoming in the adult, the result is idiocy.

While massage of the neck, spinal manipulation, and exercises assist the circulation and help to maintain the tone of all the structures within the neck, they may fail to do what the vibrations of laughter may succeed in effecting; for the movements set up are felt throughout the entire structure.

It is not possible for us to laugh to order; but we can find opportunities for indulgence in laughter. There are people whose life-work it is to make us laugh—the comedians of the stage and screen. The world's most successful laughter-makers command princely salaries; and they earn them.

In difficult times comedians take people out of their gloom, and after a good laugh in the theatre or in the private home we all feel so much better that the wise plan is to arrange for another occasion.—*Health for All.*

A GOOD GERM-KILLER.

THE best disinfectant, the most effective germ-killer, is just simply pure, unadulterated sunshine. Bacteria cannot stand the direct rays of the sun. It kills them in a few hours.

Hang out your sheets and blankets and clothing where the sun can shine directly upon them. The sun-shine will disinfect them thoroughly, leave them sweet and wholesome, with no ill-smelling, sickening odours clinging to them.

Everyday open the windows wide, raise the blinds and let the sun-shine stream into your rooms. It will purify them and make them more fit to live in. Wherever there is mold or damp, turn in the sunshine. It will silently but surely dispose of the unwholesomeness of mildew or mold and make clean and healthful every spot it reaches.

Walk in the sun, sit in the sun, leave in the sun-shine all you can. Don't live in a room that the sun does not shine in at some part of the day. You may be able to withstand its unwholesomeness for a time, you may get so used to it that you will not notice its musty smell, but all the while you are robbing your system of the very essence of life—sun-shine. Move into a room with a sunny window and note the difference. Cheerful, bright, healthy, with no trace of mustiness or dampness. It is hard to

have the blues or be depressed or despondent in a sunny room.

Plants and animals thrive in the sun-shine; without it they sicken and die. The child who lives in some basement or cellar is pale and puny; the one who plays in the sun-shine and fresh air is strong and ruddy.

Just sun-shine. Free to everybody, and yet it is the most potent healer, the most radical germ destroyer, the greatest preventive of disease.—*The Journal of Ayurveda.*

HYGIENIC VALUE OF WORK

One of the most essential things for appetite, for good digestion—for every vital function in the body, in fact —is muscular work. The muscles are the furnace of the body. If one does not use them, he will not consume his food properly. His food will not be burned as completely as it ought to be, or as it would be if his muscles where used. The exercise which one gives his muscles increases the flow of blood through them and thus increases the consumption of material which involves a change of material in the body.

For a change of material—a process of reconstruction—is constantly taking place. An old saying has it that a complete change occurs in the body substance once in seven years. This is not true literally, because as a matter of fact, some parts of the body never change at all—such, for example, as the enamel of the teeth. The blood, however, changes every six weeks and other parts change perhaps every three or four months. These changes are going on continually. The soft parts change rapidly and the hard parts slowly.

And it is this change that keeps us alive. Old age begins when the change of matter in the body becomes slow. And when this bodily change of tissue ceases, death comes.

An eminent zoologist defines an animal as a stream of matter flowing through a certain form. This is as true of man as of other animals. Each one of us has his own form, and it is the stream of matter going through this form that constitutes our life. When a dancing streamlet comes down the mountainside, here and there leaping into the air in spray over jutting rocks and glistening in the sun, it is pure and sparkling. But if in the valley that same stream runs into a hollow and stands for two or three weeks, it becomes a stagnant pool, covered over with green slime; in it the frogs croak and the mosquitoes breed, until it is a place of pestilence.

A similar thing happens when the movement of matter through the body lessens. With stagnation comes disease. Which explains why many people say, "I feel bilious"—when the body is merely stagnated.

Now there is nothing that will quicken the movement of material through the body and aid the vital changes, and stimulate the flow of the right current like exercise. That is why, if one feels drowsy and sleepy and stupid, he may take a walk in the keen

frosty air of winter and come back feeling wide awake and with a good appetite. The change is due to the room that has been made for new material. The exercise and the stimulus of the cold air have accelerated the movement of the vital currents through the body, and created a craving for new material for bodily use.

Strength comes with work. Work is the only way in the world in which one can ever gain strength. If a man has a thousand dollars the only way he can make it grow is to set it to work. He must put it out at interest or invest it as capital. If it is put away in a safe, or buried in the hole in the ground, it does not increase. In the same way we can increase our vital capital only by making use of what we have.—*Good Health.*

HEALTH-TIT-BITS.

Harmlessness of Aluminum Cooking Utensils.—For many years there have been smoldering doubts about the use of aluminum cooking pots, and experiments have repeatedly been made to determine their harmlessness or otherwise. The latest investigator is Dr. J. H. Burn, director of the pharmacological Laboratories of the Pharmaceutical Society of Great Britain, who recently addressed the Society of Public Analysts on the physiological effects of aluminum. After reviewing a variety of experiments, he stated, as reported in the *Lancet*, that "the dangers arising from aluminum utensils have been thoroughly investigated by many workers, and on many species of animals; they have also been investigated with equal thoroughness on man. These dangers are non existent."-*Good Health.*

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About Salt and Sugar.—"The health of the body is largely, if not entirely, dependent on the health of the nerve centres. Consequently, the nervous system must be nourished in order that it may maintain its powers of resistance," writes "A Physician" in a press article. Agreed, but how is the nervous system to be nourished? We part company with the physician when he puts forward the view that salt and sugar (by which we presume he refers to common table salt and refined white sugar) are necessities, the one for the blood system, the other for the nerve system. "Man deprived of salt would quickly die," he says, and states that "if he is deprived of sugar his nervous system rapidly deteriorates and his powers of resistance are lowered." It is a commonly accepted belief that salt (sodium chloride) is necessary to sustain life. That is not borne out by facts. There are scores of people who have been accustomed to its use and who have wholly discarded it, not only without detriment to their health, but with positive improvement. Millions of people subsist entirely without salt. That is not because it cannot be obtained; for in South Africa, where salt abounds, neither human beings nor lower animals make any use of it whatever. The truth is that salt is a terrible sinner. It is an irritant, and when taken into the system it is not used, being an inorganic element, and

so it imposes an artificial strain upon the depurating organs. It is also an antiseptic, and is destructive to normal tissues.

A Nerve food—Now let us consider the use and value of sugar to the human body. The above medical writer says: "Owing to the abnormal strain of modern life, large quantities of sugar, the best natural nerve food, must be used by everyone." What does he mean by "large quantities"? Most people grossly overeat of refined white sugar, which is a devitalised, denatured, foodless food. There is no vitality left in it after the refiner has done his worst. True, a certain amount of sugar is needed by the body, but it should be sugar in its purest and most natural form, such as is contained in honey and the sweet fruits, chiefly dates, figs, and raisins. Honey is undoubtedly Nature's finest sweet. It is necessary to the body as a producer of heat and energy. Honey is a simple sugar and predigested food. That is to say, it is absorbed directly into the glands that feed the body. On the other hand, refined sugar is a profound acid-former, and, used to excess, is the direct cause of many troubles.

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What an aged man should be and what not.

1. The aged will often sham illness to create sympathy.

2. An old person should walk after a meal and not be allowed to doze in his chair.

3. Lack of exercise will cause harm in senility. Exercise will often improve digestion and peristaltic action.

4. Work for the aged is necessary. Idleness plays mischief in old age. The old man who retires usually dies soon afterward.

5. Sexual activity after sixty if increased, as with old man who marries a young girl, predisposes the man to angina pectoris, cerebral hemorrhage, and œdema of the lungs.—*Home and Homœopathy.*

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Defective Vision.—In the opinion of Dr. Oscar M. Holden (M.O.H., Croydon,) there are indications of a gradual increase in the number of cases of defective vision in school children. "This," he writes, "may be more apparent than real, as vision is a subject of greater importance than in the earlier years of school medical inspection; and the correction of small defects is obtained in more children than formerly. Whether the cinematograph exerts any deleterious effect on eyesight is a matter difficult of proof in the face of many complicating factors. In the case of myopes, however, there are substantial reasons for believing that the state of nutrition and the general health are important. Myopia, or the tendency thereto, also seems to be to some extent hereditary. Undoubtedly glare from exposed and high-powered electric lights does produce undue eye-strain, and, if continued, damage to visual acuity."—*Medical officer.*

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The Ganges Water.—The Ganges is the most sacred of all rivers to the Hindus. Millions of Hindus make annual pilgrimages to Benares to bathe in the Ganges. A small jug of water that is carried home from Benares is preserved for scores of years without

spoilage. The Ganges water not only washes all the sins, but it purifies anything that is impure. The water is used as a disinfectant in sprinkling on clothes of sick persons. Ancient sages have sung her praise as the holiest of waters.

Nearly thirty years ago, a French scientist from Pasteur Institute was invited by the Government of India to come and investigate the cholera epidemic at the time of pilgrimage in Benares. It was suspected that the holiest of waters might prove to be the dirtiest and the cause of this epidemic. The investigation, however, proved just the contrary and the most remarkable discovery was made that the Ganges water was absolutely sterile. Even on inoculating a cubic centimeter of water with 5 to 6 thousand bacteria of different kinds such as those of typhoid, cholera, etc., the water showed zero count, i.e., became sterile in about three hours. Only two or three years ago another French scientist, Dr. D'Herrele, who visited India, discovered what is now known as "bacteriophage" in the holiest of waters, the Ganges. The conception of holiness ascribed to Ganges by the Hindus has survived thousands of years and might have suggested a valuable discovery to an open-minded people years ago.—*Scientific Indian.*

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Blood-Destroying Bacteria called Deadliest Enemies of Man.—The deadliest enemies of mankind, the late Sir Frederick Andrewes states in a recent report to the Medical Research Council of Great Britain, are not great beasts such as tigers or harmful insects or even deadly reptiles like cobras or rattlesnakes, but are the tiny, almost invisible bacteria belonging to the group called hemolytic streptococci. The name streptococci means that the individual living cells of these bacteria usually stick together in long rows, like beads on a string. They are called hemolytic because they have the remarkable and deadly power of dissolving the red corpuscles of human blood, so that they may destroy the power of this fluid to supply the organs of the body with needed oxygen. Different varieties, of these deadly bacteria are responsible, Sir Frederick's report states, for erysipelas, scarlet fever, pneumonia, many kinds of heart disease, many of the fatal infections that follow childbirth and for the extremely dangerous kinds of blood poisoning which sometimes occur after slight wounds or surgical operations. It often happens, too, that these bacteria invade a body weakened by some other kind of disease, thus causing many of the fatal relapses which sometimes happen after the original disease seems to be cured. These bacteria also are able, Sir Frederick and his co-workers have decided, to modify their shapes, their chemical properties and other characteristics to suit the place where they happen to be or the food that they can find. This makes it extremely difficult for bacteriologists to be sure of recognizing them in an invaded body while there still is time to ward off the fatal effects:—(Dr. E. E. Free, *The Weeks' Science.* — *Thro' The American Medicine.*

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To Sneeze or Not to Sneeze.—In a press article "A Doctor" explains why we sneeze. There is a close association

between paroxysmal attacks of sneezing and the state of the stomach. In some persons the attack, not just a sneeze, but a succession of violent sneezes, which leave their victim feeling, temporarily exhausted, follows a meal. The usual cause for an attack is irritation of the nose and throat. It is a congestion of the lining membrane of the nose or the upper part of the throat that is the immediate cause of the attack. Sneezing is essentially a protective effort, an action to expel from the nose or throat some unwanted object or some obstructive state." Persons who are subject to sneezing attacks are advised to avoid everything that is likely to cause congestion of the lining membranes. Another main line of defence is to strengthen the upper air-passages by deep nasal breathing of fresh, cool air and by douching with simple cold lotions, such as salt and water. In view of the fact that an attack of sneezing is highly inconvenient and annoying, especially when in company it may interest our readers to know how a sneeze can be aborted. All you have to do when a sneezing attack threatens is to press with the finger on the upper lip just beneath the nose. That's all, but that simple measure will prevent the sneeze:—*Health for All.*

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The Problem of the Slums.—Mr. Harry Barnes in his well-known book on the "Slum Problem," says the rich man's provision of a luxurious mansion is "only the realisation of the Poor man's appetite." He enlarges his thesis by putting *the absolute minimum accommodation* for working-class family at a living-room, three bedrooms, a scullery, larder, coal-store, bath, and W. C. If that is the "minimum" we fear it will be considered the maximum by many a worker's wife who has a lesser ideal. For as a public-health authority has reminded us, the really poor never have been housed decently, and since private enterprise must be governed by economic considerations, they never will be until the rate-paying public is prepared to find a large part of the rent. On this point it is of great medical interest to learn from Dr. McGonigle, the M.O.H. of Stockton-on-Tees, that re-housing may have unexpected consequences. Following the local slum-clearance scheme he found that the death-rate went up among the families removed to a municipal estate while that of the slum-dwellers left undisturbed remained much lower. His enquiries pointed to a deficient dietary as the cause of this misfortune to the transplanted families, and he cites plenty of evidence to show that money formerly spent on food went to pay the high rents of the up-to-date dwellings. The Lord Salisbury who was Prime Minister is reported to have said the housing of the people was the gravest question confronting the Nation, and it must remain so if the abolition of the slums is so deplorably to affect those it is intended to benefit.—*Medical World.*

BOOK REVIEWS.

Breathing Methods.—By Shri Yogendra, Founder of the Yoga Institutes in India and America, Post Box 481, Bombay. pp. 74 with 8 Illustrations. Price Re. One only.

The purpose of the Yoga Institute at Bombay is to impart scientific and practical knowledge on Yoga Culture, health, hygiene and longevity. Shri Yogendra who is the illustrious Founder of this Institute (Estd. 1918) is now engaged in editing two valuable series of books: (i) *Scientific* Yoga *Series* and (ii) *Pocket* Health *Series*. His publications are thoroughly scientific in their treatment, practical in their scope and absolutely reliable as texts. The present work under review is Vol. II of the Pocket Health Series.

The art of breathing and the technique for the control of breath belongs to the Eastern mysticism. Expert in the Yogic practices, Shri Yogendra is in a position to speak on this subject with authority. He first deals with breathing for health, giving an outline of or the various aspects of breathing and its relation to life-activity. The respiratory system is then explained with special reference to the diaphragm and exercises for training this organ. The twelve aids to deep breathing emphasize the preliminaries which the student should adhere to during his course of study. The ten different methods of breathing are unique, simple and effective. They are: 1. Costal, 2. Clavicular, 3. Diaphragmatic, 4. Packing breath, 5. Yoga Alternate, 6, Vaccum, 7. Therapeutic, 8. Complete breath, 9. Oxygenation and 10. Natural breathing. The technique is explained in very popular and lucid language. A chapter on psychic effects of breath discloses the inter-relation between breath and mind and shows how the control of breath leads to the control of the mind. It is the best work of its kind. Fully illustrated, it serves the need of a text to the students of deep breathing. We congratulate the author for the production of this most valuable series.

Yoga.—Published by Yoga Institute in India, P. O. Box 481, Bombay. Price 4 as.

This 'Yoga' Annual is edited by Shri Yogendra, who is an authority on Yoga practice and the author of several books on the Science of Yoga. The need for an organ of this kind is keenly felt, the more so, when there is a growing tendency now on the part of cultured people both in India and abroad, to dive deep into the mystic waters of ancient lore, to whatever race or clime it may belong and learn its secrets. We hope it will be largely patronized and the way is thus paved for its conversion into a quarterly or monthly. The printing and get-up are all that could be desired.